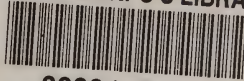


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THE DEFENSE OF ADVANCED NAVAL BASES

LOGISTICS

(NAVMC-4533)

This document is IMPORTANT because it discusses the logistical aspects of the defense of advanced naval bases from the viewpoint of the Fleet Marine Force elements, ground and air, which may be required to participate in such operations.

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Defense of Advanced Naval Bases

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QUANTICO, VIRGINIA**

May 1948

“The Defense of Advanced Naval Bases—
Logistics” is approved and published for instructional purposes in the Marine Corps Schools.

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SECTION 1

INTRODUCTION

1. **Purpose.**—The purpose of this pamphlet is to discuss the logistical aspects of the defense of advanced naval bases from the viewpoint of the Fleet Marine Force elements, ground and air, which may be required to participate in such operations.

2. **Scope.**—The publication will stress logistical problems peculiar to advanced base defense, with emphasis on the base command and ground defense force levels. Matters related to logistical support of normal base operations will be presented to the extent necessary to illustrate the relation between those functions and logistical support for defense of the base. Higher echelon logistical considerations will be presented insofar as they directly influence logistical support for base defense.

SECTION 2

HIGHER ECHELON PLANS

3. **General.**—a. Each advanced naval base forms a component of a larger system of naval organization for the support of the forces afloat. The ability of each such base to discharge its supporting functions is, in a measure, dependent upon the effectiveness with which base facilities are defended against enemy action. It is essential therefore that planning for the installation of base facilities be conducted concurrently with plans for their defense.

b. Certain logistical plans which are prepared for purposes other than the defense of a base will have a significant effect on logistical planning for base defense. These are:

(1) The Base Development Plan.

(2) The Theater Logistics Plan for the particular advanced naval base, or for the area or sub-area which includes the base.

(3) Assault Logistics Plan (when occupation, development and defense follow seizure of the base.)

4. **Base Development Plan.**—a. **General.**—The theater commander normally is responsible for all base development planning in the theater. The purpose of this planning is to achieve a broad development of theater resources in accordance with the theater strategic mission and in support of operational plans. Such plans, as they relate to each advanced naval base, are announced in a theater Base Development Plan, which is prepared by the theater commander, and which provides for the establishment of base facilities to support the fleet and its various components. This plan outlines the type and extent of development to be accomplished, along with general limitations as to time. It must give consideration to the fact that the location of base facilities normally determines the extent of the vital area of the advanced base, and thus that the problems of base development and base defense are inseparable. Furthermore, many of the base facilities which are established to support normal base operations must also contribute to the logistical support of the defense against enemy attack. Consequently, it will be essential to ensure that there is close coordination between plans for logistical support of the defense with overall plans for base development.

b. **Nature of base development planning.**—Base development planning is largely accomplished by theater level agencies in order to insure that the development is in accordance with the theater strategic plans both for operations and for the most economical employment of personnel and materiel. In determining the facilities to be established, their location

within the base and the priority of their development or construction the primary concern will be with the mission of the base. However, since these facilities must be defended and since many serve also to provide logistical support for the base defense forces, consideration must be given to defensive requirements. Early activation of the base commander's staff will permit liaison between the members of that staff and theater agencies during the development of base operation and defense plans. Likewise, the establishment and maintenance of logistical support for defense will be greatly simplified if the members of the ground defense force commander's staff are thoroughly conversant not only with the detailed plans for base development but with the requirements which dictated those plans.

c. Essential elements of the Base Development Plan.—

The essential elements of the Base Development Plan which are of concern to the base commander and his staff include the following:—

- (1) Basic Considerations—
 - (a) Mission of the base.
 - (b) Degree of permanency of installations.
 - (c) Limitations in personnel, tonnage, and equipment.
 - (d) Estimated troop population during different periods in the development of the base.
 - (e) Natural resources.
 - (f) Areas available for development.
 - (g) Priority of development projects.
- (2) Command and administrative organization, assignment of forces and command relationships.
- (3) General Layout Plans—allocation of areas and location of major installations, i.e., airfields, docks, storage areas, and principal roads.
- (4) General supply and maintenance organization and installations.
- (5) Detailed description and specifications for installations including priorities and schedule for development of:
 - (a) Utilities and natural resources.
 - (b) Port facilities.
 - (c) Airfields.
 - (d) Transportation and roads.
 - (e) Signal communications.
 - (f) Medical facilities.
 - (g) Miscellaneous facilities.

d. **Execution of the Base Development Plan.**—The base commander normally is responsible for base development as outlined in the Base Development Plan. In the case of major hostile action against the base, the relative importance of the various base development functions may be temporarily or permanently reduced. In this event, some of the personnel who are normally employed in base development are assigned to the ground defense force, some to other tactical elements of the defense forces, while the remainder pass to control of the Base Service Command to function in a manner which will contribute directly to the logistical support of the defense.

5. **Theater Logistics Plan for the Base, or Area Which Includes the Base.**—a. **General.**—As indicated in BD-1, an advanced base may be established directly under the Theater Commander or under an Area or Sub-Area Commander. In either case, theater logistics plans provide the basic information on which plans for logistical support of the base defense forces are laid. The salient points of this Theater Logistics Plan from the standpoint of the base commander are as follows:

(1) **Designation of agencies responsible for providing logistical support to the base command from outside the base or immediate area.**—This should include a comprehensive survey of all types of supplies and equipment, and the assignment of specific responsibilities to various agencies for the provision of each type or class of supplies and equipment for the base. This division of responsibility must be clearly understood by all commands concerned. The requisitioning process should be outlined in detail. In the event that the theater commander assigns responsibility for different classes of supply to different services, i.e.—Class I to Army, Class III to Navy, these Services will inform the base commander as to the specific agencies which will provide the supplies.

(2) **Allocation of logistical means to the base.**—The principal logistical means so allocated are service troops for the construction and development of the base, and those for the internal logistical support of the base. Other logistical means include shipping space in which resupply and reserve supplies and equipment can be transported.

(3) **Levels of supply to be established and maintained.**—Normally an operating level, a minimum level and sometimes a maximum level will be specified. The operating level—as the name implies—is the level of supplies necessary to fill day-to-day requirements of the base. This is the level which is drawn on between successive resupply shipments. The minimum level is that level below which the stocks at the base should not be allowed to fall as long as it is possible to get normal resupply from outside sources. The supplies included in the minimum level are normally used after the operating levels have been exhausted and resupply from outside

the base is delayed by enemy action, weather conditions or other causes. The theater plan will normally prescribe a rate of progressive increase of the minimum levels to that amount ultimately desired. If the supplies for the minimum levels are to be provided on an automatic—without requisition—basis, the phasing and composition of scheduled resupply shipments should be outlined in detail.

6. Assault Logistics Plan.—a. When occupation and defense of the base follow the seizure of the base, much of the information which influences the logistical support of the base defense forces will be contained in the logistics plan of the assault force. Under these conditions, the plan for logistical support of the base command is, in reality, an extension of the plan for logistical support of the assault force. In some cases the assault force or some of its elements, when the seizure of the base is completed, will become a part of the garrison complement of the base. In other cases the assault force may be withdrawn and replaced by other forces. In any event, supplies brought in by the assault forces and not required by them normally remain at the base and are made available to the base command to establish initial levels of supply. This is true with other logistical installations of the assault force.

b. In order to ensure that the plan for initial logistical support for the base command is carefully coordinated with that of the assault force, the staff of the prospective base commander should be available to work with the staff of the assault force commander during the planning phase. The plan for logistical support of the assault force normally will provide for turning over certain rear areas to the prospective base commander after the attack has moved inland following the initial assault. Such a plan is mutually beneficial in that it relieves the assault force of a portion of its logistical burden, and allows the new base commander to initiate the functioning of his organization at the earliest practicable time.

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SECTION 3

BASE COMMAND LOGISTICAL PLANNING FOR DEFENSE

7. Base Commander's Logistical Responsibilities.—a. The commander of an advanced naval base has the same general logistical responsibility as has any commander—that of insuring adequate logistical support for the forces under his command. The base commander's task is complicated by the fact that his plans to discharge this responsibility must provide for logistical support for the operation of the base, and at the same time provide for support of the defense of the base against hostile attack.

b. It must be realized that these two related yet dissimilar aspects of the base commander's logistical responsibility must be discharged concurrently, since base defense and base operation are themselves concurrent. Depending on the tactical situation, the emphasis of logistical support may be on base operation or base defense. In the event of major hostile action which threatens the security of the base, the execution of the original supporting mission of the base may be radically curtailed, or be abandoned entirely. In this situation, the base commander must ensure that his logistical plans make available all the facilities of the base for support of the defense. It will be seen, then, that these two dissimilar and frequently conflicting logistical functions require separate plans.

8. Essential Considerations in Logistical Planning for Defense.—a. Mission.—The base commander's defense mission normally will require him to defend the advanced base against all forms of enemy attack with all means available to him. Accordingly his plans for defense must be so comprehensive as to envisage the eventual employment of all agencies, facilities, equipment, and personnel present at the base in defense tasks if required.

b. **Enemy capabilities.—**The overall influence of enemy capabilities is discussed in detail in BD-2. From the logistical standpoint, those capabilities are important in that they indicate the probable time available to the defender to prepare for the attack and the various forms which the attack may take. The estimated time available before the enemy attack can reasonably be expected is of vital importance in planning for the logistical support of the defense. It is an indication of the probable status of construction of roads which can be used as supply routes, of docks and other facilities for unloading supplies, and of dumps for the dispersal of supplies. It is also an indication of the probable status of supply of the base command at the time of the attack, since it will show whether there is sufficient time to receive and properly disperse stockages for

minimum and operating levels. It must be remembered, however, that intelligence information will rarely be sufficiently complete and accurate to permit "time available" to be stated as an absolute quantity. Plans for logistical support of the defense must be predicted on the assumption that the enemy attack may come at any time and must visualize the employment of all agencies and facilities regardless of their relative state of development or completion. The forms of attack which the enemy is capable of launching will determine the dispersion and protection required for supply dumps and other logistical installations. It will also indicate the difficulty which can be anticipated in the movement of supplies within the base area once the attack starts. This will, in turn, influence the size of reserve dumps and relative proportions of supplies which must be stock-piled at battle positions and other defensive sites. In addition, enemy capabilities will indicate the relative possibility of resupply of the base from outside sources once the attack has commenced.

c. Forces, supplies, and equipment available to the base commander.—These are, in a very real sense, the means by which the commander can accomplish the defense of the advanced base. They are important from the logistical viewpoint because of the following:

(1) **Forces.**—The number and type of combat troops indicate the type of defense which can be adopted. In addition, it is an indication of the types and amounts of supplies which will have to be provided. Included in the term "forces" are service troops—the tools for the accomplishment of any logistical plan. The number and type of service troops will definitely circumscribe the logistical support which can be provided the base defense forces.

(2) **Supplies and equipment.**—Supplies and equipment are the logical counterparts of service troops in any logistical plan. It must be expected that, as with any other resources in the early part of a war, the availability to the base commander of needed supplies and equipment will be dependent on the overall status of availability within the theater. Normally, initial theater directives to the base commander will indicate what supplies and equipment will be available to the base and on what time-table. The base commander must make adequate provision for the use in base defense, when required, of supplies and equipment which are originally provided for and used in base development and normal base operation.

d. Tactical plan.—The general principles regarding the relationship between tactical and logistical plans for base defense are identical with those applicable to defensive operations in normal land warfare. The logistical plan must provide adequate and continuous support to the tactical plan, and

tactical and logistical planning must proceed concurrently and be coordinated. There is, however, one aspect of base defense which may alter the usual relationship between tactical and logistical plans. Whereas in normal land warfare a defensive plan which cannot be given proper logistical support may be abandoned in favor of another which can be supported, in base defense the vital localities, together with terrain limitations, may demand a certain tactical line of action, even though this may entail extremely difficult logistical problems.

e. Situation as regards existing facilities and resources at the base.—It is obvious that, if the base is established at the conclusion of the assault operations, the situation will be far different from that existing in a base established in our own, friendly, or unoccupied territory without the necessity for assault operations.

(1) Base occupied at the conclusion of assault.—In such cases, many of the installations suitable for use in providing logistical support to the base defense force will be destroyed. These may include roads, bridges, warehouses, docks, and water systems. However, it is likely that considerable stockages of supplies will have been landed by the assault forces and will be available, at the conclusion of the assault, to the defense forces. Many of the assault logistical installations will also be available. Since a logistical plan for an assault force is radically different from one for base defense, a complete and often rather difficult transition will be required.

(2) Occupation of own, friendly, or unoccupied territory.—In this situation the area normally will not have been subject to our own air and naval bombardment and consequently the existing facilities, roads, bridges, docks, should be intact. In addition, it is often possible in this circumstance to make detailed preliminary reconnaissance and thus base the logistical plan for support of the defense on more accurate information than would otherwise be the case. In this second case, it is likely that the civilian populace will be friendly and of considerable assistance in the matter of labor and other considerations.

f. Resupply.—The practicability of resupply from outside the base in the event of enemy attack is of vital importance to the base commander. This problem must be examined carefully from the viewpoint of enemy capabilities. If the enemy has only the capability of raids by air, surface or ground force, resupply may not be greatly affected. The capability of major land action or of airborne attack may have more serious implications, particularly if ready access to the sea by the defense force can be threatened. When resupply is, as is normal, by surface sea transportation, a major landing attack by hostile forces, or naval blockade, present the greatest threats to resupply. It must be assumed that the enemy, when launching

an assault from the sea on one of our advanced naval bases will gain at least local air and naval superiority before attempting a landing. As long as this situation exists, the possibility of providing resupply of any consequence will be remote. Small amounts of critical supplies may be brought in by submarine or small surface craft which evade the naval blockade, or may be delivered by friendly aircraft which penetrate the air screen. It must be expected, however, that the supplies physically present on the base will be the only appreciable quantities available to the defense force. This indicates the necessity for an efficient system for early resupply which will ensure that operating and minimum levels of supply are speedily established and are maintained until the last possible moment prior to the attack.

g. Organization of logistical agencies.—Certain aspects of the logistical organization of the base may be dictated by the theater commander in the assignment of logistical agencies. The base commander has considerable latitude in organizing the agencies available to him. In effecting this organization the base commander must give consideration to his dual mission.—(1) development and operation and (2) defense. His basic organization should be capable of providing the required logistical support in the execution of both missions and should permit ready transition to a form which will ensure that all facilities of the base, when required, can function in support of the defense. Since each advanced base presents an individual problem of organization, no fixed organization of general application can be prescribed. Figures 1 and 2 illustrate sample organizations for logistical support of both base operation and base defense. It will be noted that these organizations provide for the following:

(1) A Base Development Command into which all construction forces assigned to the development of the advanced naval base are grouped. This agency should greatly assist the commander in discharging his responsibility for developing the base and ensure a more effective utilization of engineer effort and construction materials.

(2) A central service agency, the Base Service Command, which coordinates all supply and service activities except those concerned with base construction.

(3) Defense of the base with minimum derangement of base operation.

ORGANIZATION OF LOGISTICAL AGENCIES FOR BASE OPERATION

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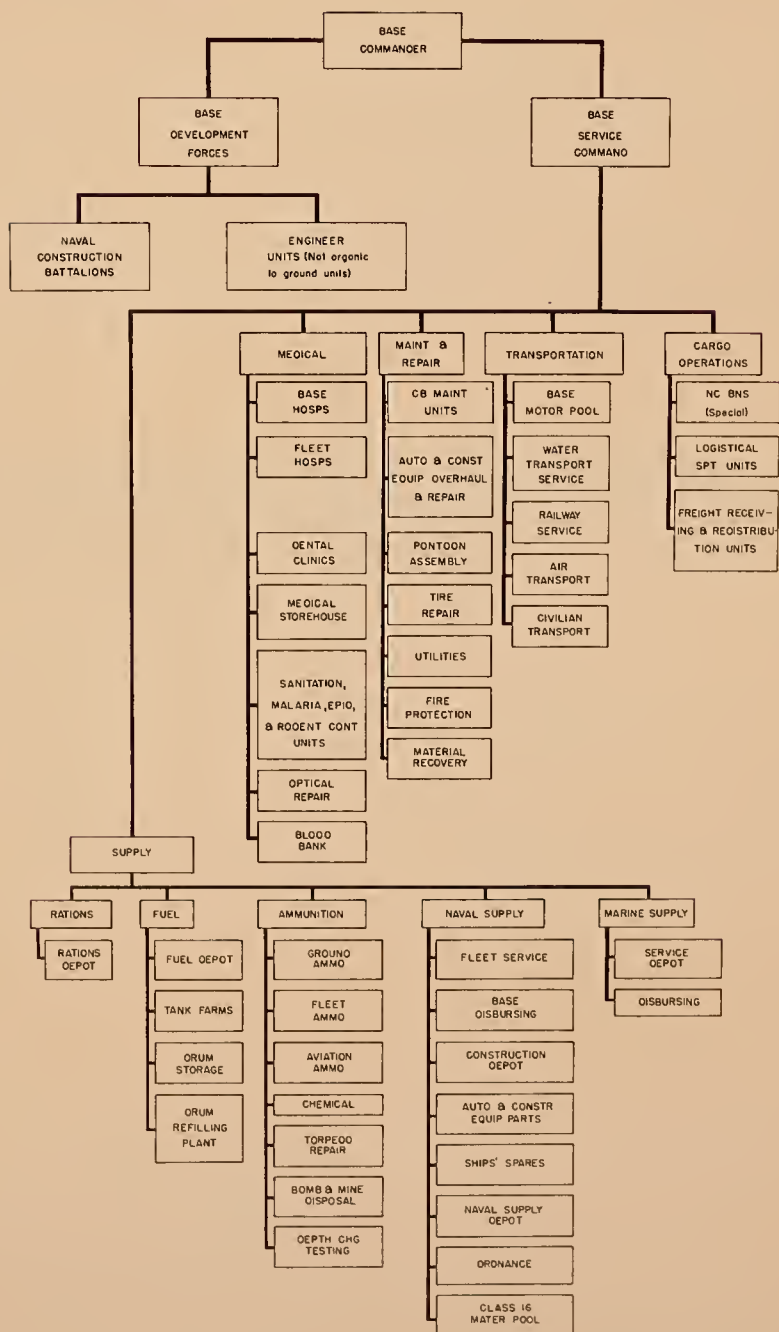


FIGURE 1

ORGANIZATION OF LOGISTICAL AGENCIES DURING THE CONDUCT OF THE DEFENSE

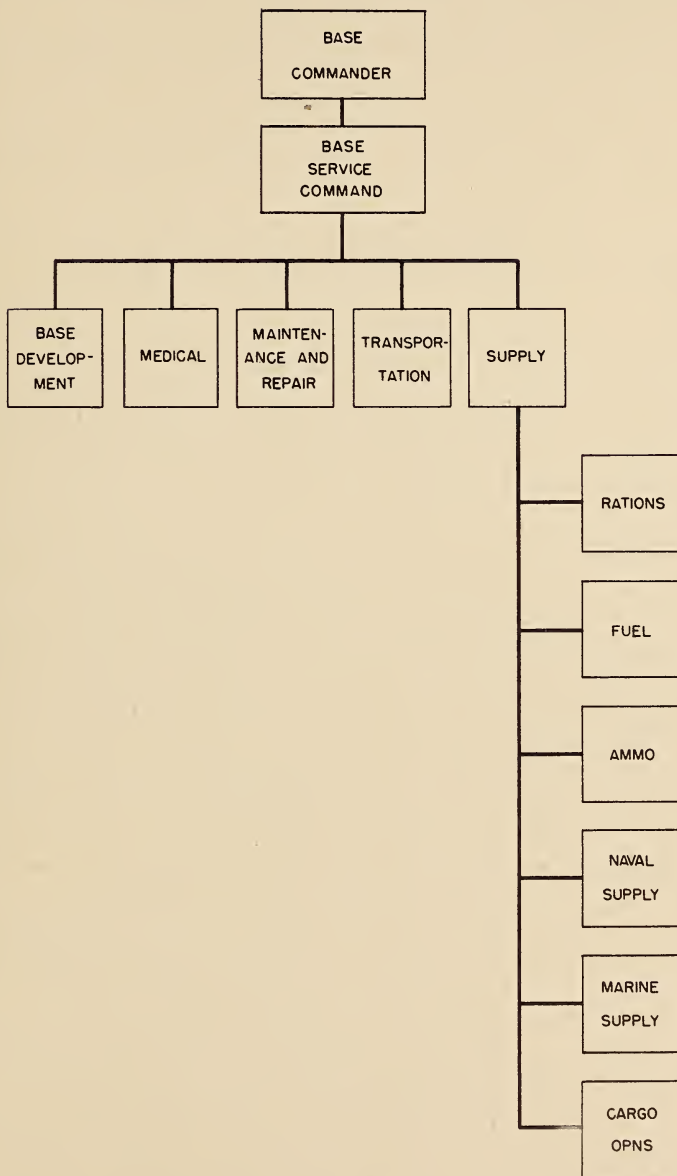


Figure 2

9. Sources of the Defense Logistics Plan.—There are four primary sources of information which provide essential information for, and a suitable line of departure from which the logistics plan for support of the defense of the base can be developed. These are:

a. Base Commander's tactical plan for the defense of the base. This is the tactical plan for which logistical support must be provided.

b. Base Development Plan. This plan sets forth the facilities to be established, their location, and a time table for their completion.

c. The Theater Logistics Plan for the base. This plan designates agencies to provide logistical support, allocates logistical means and prescribes levels of supply to be established.

d. Assault Logistics Plan (when occupation follows seizure of the base). Much of the information normally found in c. above will be found in the assault logistics plan when base defense follows assault operations for the seizure of the base. The plan for the logistical support of the defense force is actually an extension of the plan for logistical support of the assault force.

10. Administrative Plan for Base Defense.—a. **General.**—As indicated in paragraph 7, normally a minimum of two administrative plans will be required to provide complete instructions for logistical support of both normal base operation and of defense of the base. For the sake of simplicity and efficiency, it is desirable to have these two plans as nearly alike as circumstances permit—that is, to reduce to an absolute minimum the changes required by developments in the tactical situation. Accordingly, many provisions of the administrative plan for base operation will also be found in the administrative plan for base defense. Where procedures in the logistics plan for defense are at variance with those in the plan for base operation, the method of effecting any necessary transition from one to the other should be outlined in detail.

b. **Form.**—No standard form for the administrative plan for defense of a base is prescribed. It is similar to an administrative order for any other type of defensive action.

c. **Essential Elements.**—While no standard form for the administrative plan is prescribed, the following essential elements should be covered in the plan and its annexes:

(1) **Responsibilities for logistical support.**—The responsibilities of all agencies concerned with logistical support of the defense forces should be set forth in specific detail. This should serve to instruct the particular agencies concerned and to advise all units of the arrangements which have been made for their logistical support.

(2) **Plan of supply.**—This should be a complete outline of the plan of supply for all units under the varying conditions which will obtain during the course of the defense. (See Section 5—Supply.)

(3) **Location of logistical agencies.**—This can best be shown by an overlay which is issued as an annex to the administrative plan. As agencies shift location, the plan can be kept current by issuing a revised overlay.

(4) **Construction.**—This is normally limited to the construction that is planned in support of the defense of the base; i.e., roads and bridges. (See Section 4—Construction.)

(5) **Maintenance, salvage and materiel evacuation.**—This will include a resumé of the provisions that have been made for maintenance, for salvage, and for materiel evacuation during the conduct of the defense.

(6) **Transportation.**—Provision for the control and employment of all forms of transportation during the conduct of the defense. Normally, motor transport is the only means which will be used to any great extent during the conduct of the defense. (See Section 6—Transportation.)

(7) **Traffic control and circulation.**—The plan for traffic control and circulation is normally best shown on a map or overlay issued as an annex. Where required by the tactical situation, all traffic is restricted to that absolutely essential to the needs of the defense force.

(8) **Civilian control.**—Civilian control may present a problem of great magnitude depending on the number, type and attitude of the civilians present. The plan for base operation will contain detailed instructions for civil administration and control. The plan for defense will include only those instructions necessary to ensure the relative safety of the civilians and the controls necessary to prevent civilian interference with the defense forces. These measures may include the evacuation of civilians from any or all areas of the base.

(9) **Medical facilities and personnel evacuation.**—Procedures for evacuation of personnel will be outlined and the medical facilities available to the defense force shown. All medical installations present in the base are used by the defense force if required. (See Section 7—Medical.)

(10) **Miscellaneous.**—All other instructions and information pertinent to the logistical support of the defense which are not appropriately included in the above topics, including provision for destruction of base facilities to prevent their use by the enemy.

SECTION 4

CONSTRUCTION AND MAINTENANCE

11. **Construction Forces.**—a. Normally all forces at the base will be available to the base commander for accomplishment of the authorized construction program, including defensive installations. All personnel not fully occupied with other important duties should be utilized to assist construction personnel. Also native labor should be employed where feasible, and utilized to the maximum extent possible.

b. Much of the maintenance and minor construction work in a base command can, and should be, accomplished by the using forces without the employment of construction troops. There will be occasion, however, when major construction demands on the base exceed greatly the capabilities of construction forces available. Under such circumstances other forces may be assigned construction duties. The decision to undertake such diversion should be made, however, only after consideration of its effect on the primary function of the troops so diverted. The responsibility for technical supervision and direction of such construction should be charged to the appropriate element of the construction force.

c. The organization of construction forces of a base command varies in accordance with the needs and characteristics of the particular base. The efficient and economical prosecution of major construction projects requires highly centralized technical control and direction. By centralized organization of construction forces at a high command level, responsiveness to decisions and policy of that command is increased. flexibility in the employment of construction forces is promoted and dissipation of construction capabilities is minimized. Construction troops required for common facilities, and for major construction projects in general support of all forces, should be organized as a construction force under the base commander. This construction force may be titled the Base Development Command (see figure 1), and should include all naval construction battalions, and other construction troops not organic to combat elements, attached to the base.

d. A centrally controlled construction force should be responsive in its operations to the urgent requirements of lower command echelons who are acting within the scope of directives from the higher authority establishing the program. Adjustments in accordance with the program should be worked out in lower echelons of the construction force by direct contact with the using troops. It should be recognized, however, that construction capabilities will rarely provide more than bare essentials and that many construction demands of lower echelons of the operating forces will not be satisfied. While on one

hand the dissipation of construction effort on nonessential projects should be avoided, on the other, it is necessary to satisfy promptly the essential construction needs of the forces served.

e. Progress of the construction program will often be affected by hostile action. The base commander should, in his defense planning, provide for modifications in the construction program under all foreseeable forms of enemy attack. For each tactical contingency, defense plans should envisage which construction projects are vitally necessary to the defense and to base operation. Plans should be made for the diversion to these projects of all construction forces which can be economically utilized. In the event of a major assault on the base, defense plans may require cessation of all base development as such. Except for those construction projects essential to defense or base operation, construction forces are made available to the defense force as dictated by the tactical situation. Those construction forces not assigned to specific combat elements should, for economy of force and better coordination of effort, pass to control of the Base Service Command for general support of the defense.

f. Normally, the ground defense force will have available for construction of fortifications, supply and other defense installations only their organic engineers and other organic or attached troops. When service troops, not a part of the ground defense force, arrive in the base prior to the time when they can perform their normal mission, consideration should be given to employing them to assist in the construction of defensive works. When attack appears probable, any and all personnel in the base may be assigned to assist in such construction.

12. Maintenance Forces.—a. Normally the theater commander will assign certain forces to the base for maintenance and repair work. These forces should be under the operational control of one central authority who can allocate personnel in accordance with the work load. They should not be dissipated on maintenance and repair of individual facilities of using activities, but instead should furnish technical assistance, direction and training to personnel of the using activities in order to make these activities as near self-sufficient as practicable. Base maintenance forces should mainly be utilized in maintenance of common use facilities such as utilities, i.e., water, sewerage, power, roads and fire protection. This does not preclude the assignment of maintenance forces to specific facilities when the bulk of their effort will be expended for that facility.

b. As regards construction and operation of base facilities, it will usually be the policy to construct a facility according to specifications laid down by the base commander, and, when the facility is operationally complete, to turn it

over to the using agency. Thereafter, its maintenance becomes a responsibility of the using agency or the base maintenance forces. In this respect maintenance forces perform a service, and are, accordingly, under the overall coordination of the base service commander (See figure 1).

c. For support of the defense of the base, certain critical base facilities must be maintained operational until actually captured by the enemy. Examples of these are airstrips, roads, fuel lines, bridges and water supply. When it is obvious that these facilities are going to fall to the enemy, the maintenance forces should, on order of the base commander or delegated subordinate, render them useless to the enemy.

13. **Airfields.**—a. The base commander normally is given authority to change the planned location of airfields, if those locations are found to be unsuitable because of existing topographic or soil conditions, or if they are deemed unsuitable from an operational standpoint by the base air commander. Initial planning should include alternate sites for airfields to obviate the possibility of changes in location which may prove operationally unsatisfactory.

b. Sites which meet the minimum requirements for rapid and economical airfield development are rare and are usually highly desirable for other base activities and installations as well. While adequate sites generally can be found for other activities, alternate sites for airfields ordinarily will entail a disproportionate construction effort.

c. One of the prime considerations in locating an airfield should be the defensibility of the general airfield area, and its relation to other defense installations. In locating the airfield, consideration must also be given to the degree of natural camouflage afforded by the location. No area should be cleared of natural cover, unless such clearing is required for functional reasons. Dumps for fuel, ammunition and other supplies, vehicles and equipment, tank farms, and buildings should be placed under natural cover where practicable.

14. **Roads and Bridges.**—a. The importance of an early decision on the road net of a base cannot be over-emphasized. The normal tendency is to improve the existing road net and to plan the facilities to be constructed to fit the expanded road net. This system, while economical of effort, may not fill the requirements of roads for the defense of the base and may unnecessarily complicate traffic control.

b. The road net should be planned to provide main supply routes to all parts of the base. Alternate roads should also be planned to provide substitute routes when enemy action makes the use of main supply routes impracticable, or to relieve the main routes in times of peak traffic.

c. The planning of roads must be closely integrated with the tactical plan for the defense of the base. Care must be taken to assure that all areas of the base are accessible by road to permit rapid movement of armor, supplies and reserves to these areas when under attack. Roads should be interconnected at their extremities if practicable to permit movement from one area to another over the shortest possible distance.

d. All bridges should, if practicable, be constructed, and existing bridges reinforced, to carry the heaviest types of equipment which will participate in the defense of the base.

15. Port Development.—There are three general categories of port construction work: harbor clearance, harbor development, and waterfront development. In the event of major attack on the base, harbor clearance operations normally are continued as required to maintain the harbor usable for defense purposes.

16. Railroads.—a. Railroad construction normally is limited to rehabilitation of existing systems. This rehabilitation and more deliberate reconstruction such as the replacement of heavy bridges, is undertaken by the base development command. The maintenance of rolling stock and routine maintenance of way, as well as operation of railroads, will generally be provided by the base service command.

b. Adequate plans must be made for rendering the rolling stock and road beds unusable by the enemy in case of imminent capture.

17. Supply and Maintenance Installations.—a. The location of supply and maintenance installations must be closely integrated with the plan of defense as these installations must continue to function during conduct of the actual defense of the base. Locations should be selected with respect to the troops to be supported; the defensibility of the installations by defense forces; the road net; construction effort required and the degree of natural cover and camouflage afforded.

b. The construction of supply and maintenance installations should be undertaken, at least initially, on the basis of obtaining the necessary degree of protection with minimum expenditure of labor, material, and shipping space. Provision of adequate covered storage for certain perishable supplies must be provided. Examples of these types of supplies would be pyrotechnics, electronics and aircraft spares, clothing, optics and medical supplies. Consideration should also be given, based on the tactical situation, to locating certain vital supply and maintenance facilities underground or in bombproof shelters above ground.

18. Utilities.—a. **Power.**—Military forces reporting to a base bring with them power plants required for their initial operations. The base development command is normally

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charged with the installation of heavier and more efficient power units for base use, and with the rehabilitation of existing power systems for military use. Consideration must be given to the relative value of placing power plants for vital installations such as command or communication centers, either underground or in bombproof shelters.

b. **Water.**—The development of wells and storage reservoirs into local systems and, finally, into common systems is the responsibility of the base development command. In addition, provision must be made for water supply of the defense forces by use of their organic equipment or local water supply.

c. The operation and maintenance of all utilities comes under the cognizance of the base service commander. Once the utility has been constructed by the base development command, it is turned over to the base service command. Utilities other than those mentioned above might include trash dumps, salvageable metal and materials dumps, sewage disposal, garbage disposal, pipe lines, and roads and bridges. Provision must be made by the base service commander for the continued operation and maintenance of vital utilities during the defense and the destruction of these utilities to render them useless to the enemy should the situation require such action.

19. **Signal Communications Facilities.**—a. Signal communications construction units, responsible for installation of technical facilities, are provided as part of the signal communications force. Additional construction support is provided by the base development command as required. This support consists generally of site preparation and building construction for communications facilities.

b. Efficient communications facilities are essential to successful conduct of the defense. For this reason and because of the nature of communication equipment, considerable permanent or semi-permanent construction, i.e., underground or bombproof shelters, will be required for these facilities. These fixed locations must be supplemented by mobile installations to lend flexibility to the communication plan. The location of the fixed installations must be closely coordinated with the tactical plan to assure that the facilities are near command posts and within the battle positions.

20. **Medical Facilities.**—In the selection of sites for medical facilities, the defense plan, water supply, road net, accessibility to evacuation centers such as airfields and port installations, and sewage disposal systems should be carefully investigated before construction is started.

21. **Troop Housing.**—Initially troop housing should be limited generally to tentage or such other shelter as will satisfy minimum requirements imposed by the particular operating conditions. As base development progresses, better housing as

authorized by the base development plan is initiated. Construction to a large extent can be accomplished by the occupying troops as materials are made available. It is most important that uniform standards of housing for all units of the base, operating under similar conditions, be established to avoid serious morale problems and to ensure economy of materials. Troop housing should be planned with a view to necessity for dispersion, accessibility to training areas and key defensive localities, and to supply installations.

22. Defense Installations.—a. Defense installations are constructed as shown in the base development plan or in construction directives, and as specified by the base commander. The bulk of the defense installations are constructed by the occupying troops. Heavy construction, beyond the capability of the integral construction elements of tactical forces, is charged to the base development command. Local or salvaged materials should be used where practicable. Other construction materials should be made available by the base commander as required.

b. Types of defense installations required include:

(1) Air raid warning sirens, or other sound apparatus capable of being heard clearly, should be provided at locations near personnel concentrations.

(2) Suitable gas attack alarms should be constructed using salvaged materials, if practicable.

(3) Foxholes and slit trenches for all personnel should be excavated by the using personnel.

(4) When listed in the base development plan or other construction directives, decontamination centers provided with shower facilities should be constructed. Underground command posts and personnel shelters should also be provided, if practicable.

(5) Concrete gun positions for seacoast, heavy AA and possibly field artillery.

(6) Concrete bunkers or pillboxes for defensive positions, especially on landing beaches and in drop zones.

(7) Heavy anti-tank defenses.

(8) Complete organization of the final defensive position.

c. Camouflage installation should proceed concurrently with construction operations as long as the tactical situation requires measures for concealment of facilities. Natural cover will be preserved and utilized where practicable. In the selection of sites for all projects, the possibility of providing camouflage must be given proper consideration.

d. Revetments should be provided initially for critical and vulnerable equipment and installations. Included in this category are generators furnishing power for radio, radar installations and hospitals, tank farms, ammunition, and aircraft.

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23. **Miscellaneous.**—It is essential that all construction for recreation facilities, in-transit camps, training facilities, prisoners of war compounds, and other special purposes or activities be integrated into the construction program so that priorities may be assigned and timely and adequate provision for the required forces and materials may be made.

SECTION 5

SUPPLY

24. Organization for Supply.—a. Base commander's responsibilities.—(1) The base commander may have a dual supply responsibility. First, he may be charged by higher authority with supply missions involving support of combat operations or of theater forces not a part of the base; in fact, in some cases this form of logistical support may be the primary mission of the base. Second, the base commander is always responsible for the supply of all base units and may be charged with supply of certain forces in a transient status.

(2) This dual supply responsibility, rather than placing an additional burden on the base commander, should serve to reduce the supply problem within the base, provided care is exercised to so organize the supply system as to prevent duplication of installations and supply functions. Careful planning for the supply organization will ensure that maximum use is made of theater installations to supply base units, and conversely that base utilities are employed to maintain theater installations existing within the base.

(3) The base commander is responsible for:

(a) Coordinating all supply activities of the base in order to discharge effectively his theater supply responsibility, and for the efficient and equitable supply of all base units.

(b) Establishing a system of supply which will support most effectively the defense of the base under all foreseeable tactical situations.

b. Principles of base organization for supply.—(1) The base commander's planning for supply organization must consider supply for both base operation and base defense under all tactical contingencies, in order that the changing requirements for support of the base defense can be met at a tempo required by the situation and with a minimum dislocation of command arrangements.

(2) Subordinate commanders have only those supply functions specifically assigned to them by the base commander. The diversity of forces which may be present in any advanced base make it impractical to set forth any fixed system of supply responsibilities for subordinate commanders which would be applicable to all bases. Figures 1 and 2 show sample organizations of logistical agencies of a base. In some bases all of these type units will not be present, in others still additional types may be included.

(3) Regardless of the number of units present, one agency should have overall responsibility for supply in order to coordinate all supply activities, standardize procurement

methods, and supervise the reception, storage and distribution of all supplies. This agency is normally the base service command but may be a subordinate element of the base service command.

(4) Additional supply functions, such as estimation of future requirements, screening of requisitions, and establishment of shipping priorities, may be retained by the base commander or delegated by him to the base service commander. The extent to which such authority will be delegated by the base commander will usually be dictated by the adequacy of his logistical staff.

(5) Provision of each item of common supply, such as rations, water, petroleum products, and ammunition common to all units should be the responsibility of one agency. While these agencies will normally be subordinate elements of the base service command, this will not invariably be the case. For example, within the base there may be an installation, such as a fuel depot, a theater or area agency whose primary mission is the supply of petroleum products to forces both within and outside the base.

(6) Provision of technical items is normally the responsibility of the major subordinate using element in each case. For example, the base air command normally will store and distribute aircraft spare parts for the base as a whole.

(7) The base commander's plan of supply will specifically assign supply responsibilities to assure effective supply for both base operation and base defense. In the assignment of supply responsibilities, the base commander will be guided by his estimate of:

(a) The need for each item of supply when the base is under any foreseeable form of attack.

(b) The ability of subordinate commanders to discharge their assigned supply functions during defense of the base. For example, it is unrealistic to assign a supply function to a subordinate commander for base operation, when in the plan for defense that command no longer exists or will be so depleted as to be unable to discharge its supply function.

25. Base Supply Levels.—a. Relationship with theater levels.—(1) The theater commander is responsible for the support of all forces in the theater in the conduct of operations. As regards supply, this support rests upon the broad foundation of:

(a) Supplies in the theater.

(b) Transport; land, sea, and air, required to move these supplies.

(c) Service troops of all types required to receive, store, maintain, and distribute supplies.

(2) The procurement of supplies, with the exception of those procured by exploitation of local resources, is a function of the zone of the interior. The theater commander, therefore, in the discharge of his supply function, normally will limit himself to:

(a) Planning for the overall support of the theater, including determination of requirements.

(b) Exploitation of local resources.

(c) Allocation of responsibilities for requisitioning, storage, and distribution of supplies to major subordinates.

(d) Control of critical items.

(3) The theater commander, in planning for the support of operations, determines the theater's operating requirements and the necessary theater reserve level. These two levels, operating and reserve, must then be placed in bases in the theater. The amounts and types of supplies at any base will depend upon the location of the base with respect to present and projected operations, location of the base with respect to other bases, frequency of resupply shipping, and distance from supply sources. The amount of supplies at any base may, therefore, only indirectly reflect the numbers and types of troops in the base.

(4) The theater commander, or area commander, prescribes for each base a minimum and an operating level, and may in addition prescribe a maximum level.

b. Both theater commander and base commander should continually review the current and projected status of the base in order to keep base stocks consonant with theater and base requirements. Changes in strategy, changes in the tempo of operations, and hostile action all require constant revision of the amounts of supplies required for the base. While this analysis is not a responsibility of the ground defense force commander, it is of interest to him, both from the standpoint of requirements for adequate support of the defense, and from the standpoint of the defensibility of large base installations.

26. Supply Installations.—a. Location and type.—(1) The locations and types of supply installations are influenced by:

(a) The mission of the base.

(b) The degree of permanency of the installations.

(c) Time factors.

(d) The tactical plan for defense of the base.

(e) The variety of forms which enemy attack against the base may take.

(2) In cases where the mission of the base does not involve supply of other forces by base installations, the base commander has to resolve the problem of locating supply installations after consideration of two desirable characteristics, which may be conflicting.

(a) Location of installations with a view to convenience in base operation.

(b) Location of installations with a view to their defensibility and ability to function when the base is under attack. For example, the most convenient area for ration storage may be one which is so vulnerable to hostile action as to render it indefensible.

(3) In cases where the mission of the base involves supply of fleet operations or of other forces, a third consideration is interjected. Supply installations supporting major theater forces, usually require extensive areas, ready access to transshipment points and large quantities of cargo handling machinery. These supply installations generally function most effectively when the cargo haul is short, and when the installation is arranged for good internal administration. These characteristics will almost invariably conflict with those affecting its defense. Where practicable, the installation should be sited for best protection against hostile action. When this is impracticable, as for example in the case of a fuel depot which supplies a forward area, and whose location must be near the shore, the base commander should consider the possibility of its destruction by hostile action and establish additional reserves as required to support the defense of the base.

(4) Before supply installations can be located, the commander's plans for defense must be known, including the extent of the vital area, boundaries of sectors, and plans for employment of the general reserve under all foreseeable tactical contingencies. In some cases, the location of certain types of supply installations will be dictated by their mission or by terrain. Examples are airfield servicing installations and docks. The tactical plan must, in turn, provide for the defense of these installations. It will be seen that the evolution of the tactical plan and that of the supply plan are concurrent and related.

(5) The type of installation to be constructed should be decided after consideration of the degree of permanency required. The shortage of construction materials and personnel invariably existing in theaters of operation requires that only the minimum amount of construction be initiated. The problem sometimes is not how much to construct, but rather how little need be constructed. This becomes a more acute problem as time passes, as the tendency is to add to existing facilities beyond the time when additional construction is required.

(6) Enemy capabilities as to form of attack and time of attack influence, to a marked degree, the location of supply installations. If the enemy may attack with naval, air, ground or a combination of such forces, supply installations must be widely dispersed, intensive camouflage measures undertaken, and alternate routes of supply provided. Dispersal assumes a greater importance in the light of developments of atomic explosives and forms of guided missiles. Where the enemy has a capability of early attack following occupation of the base, initial supply installations may have to be located solely from the viewpoint of support of the defense and without regard to previously planned location.

27. Distributing Point and Reserves.—a. Subject to the foregoing considerations, the support of the defense requires placing large stocks deep in the vital area so that maneuver of hostile forces will not immediately threaten them. The disadvantage of increased distance is compensated for by placing in battle positions the necessary quantities of battle supplies, and by establishing sector reserve dumps and emergency dumps.

b. The normal needs of the base for base operation and combat needs as practicable for defense are provided for by the use of operating level distributing points. The number of such distributing points is determined solely by the needs of the using units, for both base operation and base defense.

c. In addition to the operating level distributing points, flexibility and depth are provided by establishing reserves as follows:

- (1) "On position" reserves.
- (2) Prescribed loads on vehicles.
- (3) Sector reserves.
- (4) Emergency reserves.

d. "On position" reserves are those placed at troop defensive positions. Normally, "on position" reserves are limited to Class I and V supplies. These reserves are at the disposal of the local unit commander and constitute the first echelon of replenishment when normal replenishment is inadequate. If a weapon is sited with a regular and alternate position, the "on position" reserve is divided between regular and alternate positions.

e. Prescribed loads are designated quantities of supplies carried on order in unit transport. These loads normally are not carried during base operation, but are laid down in the plan of supply for base defense. Once prescribed loads are carried, they are unloaded only to replenish "on position" reserves, or on order of the unit commander. When a vehicle has unloaded its prescribed load for replenishment of "on position" reserves or for other reason, it replaces its prescribed load at the first opportunity.

f. Sector reserves provide the third supply echelon in depth. Sector reserves consist of designated quantities of battle supplies, allocated for the support of a defense sector. They are drawn only upon order of the sector commander or for rotation of stocks.

g. Emergency reserves, consisting of quantities of supplies of all types required for the defense of the base, are established in dumps under the direct control of the base commander.

28. **Distribution Control.**—a. Upon the occupation of the base, control measures must be undertaken immediately to ensure proper safeguarding and equitable distribution of all supplies. It is during this early phase of base development that the base commander should estimate the situation and make his decision regarding priorities for the use of critical materials. Following his approval of the tactical plan for defense, battle supplies are issued for support of the defense. "On position" sector and emergency reserves are established and dump areas are prepared and stocked. Decision as to priority for use of such base development materials as lumber, cement, explosives, signal equipment and earth moving equipment can be made by the base commander only after an estimate of the situation.

b. For base operation, a simple system of distribution control should be established which will permit efficient operation of the base with a minimum of administrative complication. The system should be one which can effect a transition to full support of base defense with a minimum change. This is particularly important as regards those supplies required by the defense forces in battle. Measures should be instituted to ensure that reserves of all types are maintained at prescribed levels; that stocks in these reserves are rotated at required intervals; and that the procedures for distribution of Classes I, III, V, engineer, and medical supplies are, insofar as practicable, identical with those to be used in base defense. Either supply point or unit distribution may be used. Supplies required for base operation come from operating level stocks. Reserves are held intact, however, a system of stock rotation is essential in order to ensure that reserves required for defense are usable, and to prevent loss by deterioration.

c. In the conduct of the defense, supply procedures follow, insofar as practicable, those used in normal defensive action. The base service command should be charged with the logistical support of the defense and should issue supplies in accordance with the needs of the defense force. The normal system of supply is continued as long as the situation permits, or until operating level stocks are exhausted. With an adequate road net, normally no distributing points need be established by units larger than the battalion. Supplies should be trucked

directly from distributing points of the base service command to the issuing unit. All Class II and IV, including necessary similar items of naval equipment should be made available to the defense force. When operating level stocks are expended or destroyed, or when lines of communication are no longer open, the reserves are used. "On position" reserves and prescribed loads are employed at the discretion of the local unit commander. Sector reserves are employed on order of the sector commander. Emergency reserves are employed only on order of the base commander.

29. Supply Within Sectors.—a. The sector commander, in planning for the supply of his sector, adheres to the basic principles of supply as applicable to the defense. Plans are made for the supply of troops in fixed positions and also for the sector reserve. Normally, the ground defense force commander will assign specific quantities of Classes I, III and V reserve supplies to the sector commander. These reserve supplies are further assigned by the sector commander as sector reserves, prescribed loads and "on position" reserves.

b. The sector reserve is under direct control of the sector commander and no issues are made without his authority. The sector reserve distributing points should be centrally located with respect to battle positions, should be dispersed as necessary for security, and be readily accessible to motor transport.

c. The "on position" reserves are assigned by the sector commander to subsectors for further assignment to units of the sector. The "on position" reserves are placed at troop or gun positions throughout the sector and constitute the first echelon of reserve supplies. While the exact amount of Classes I and V which should be placed on position must be determined in each case, as a general rule not less than one day's expenditures are required. It must be expected that replenishment will have to be made during darkness.

d. The sector commander assigns as prescribed loads such quantities of Classes I, III and V reserve supplies as he believes desirable. This decision can be made only after an analysis of the sector's road system, the transport available and the tactical plan. These quantities are placed in protected dumps along routes leading into forward positions. On order of the sector commander, vehicles are loaded with their prescribed loads. These prescribed loads are maintained on the vehicles thereafter until the sector commander decides they are no longer required. The prescribed loads ensure that all vehicles entering the forward area will have food and ammunition to provide emergency replacement of these vital items. The prescribed loads also provide the means for immediate

replenishment of "on position" supplies. As soon as the prescribed load of any vehicle has been unloaded to replenish an "on position" dump, the vehicle driver renews his prescribed load. The sector commander may order prescribed loads removed at any time for other employment of motor transport.

e. None of the reserve supplies assigned to the sector commander are used as long as supply from base operating levels is possible. In addition to the establishment of "on position" dumps, prescribed loads, and sector dumps, and the preparation of plans for the use of reserve supplies, the sector commander must plan for supply of his sector from base operating levels. The supporting service agency will issue all classes of supplies in accordance with directives of higher authority. These supplies may be delivered to sector distributing points, or the sector commander may be required to send his motor transport to pick up the supplies at the distributing point of the issuing agency. In either case, the sector commander must provide for the distribution of all supplies within his sector. In his plans for effecting this distribution, he must ensure, insofar as practicable, that the system of distribution control he employs can function effectively under all foreseeable conditions. Particular attention should be given to the problem of supplying ammunition and hot food to forward units while engaged in combat.

f. The problems of sector supply are often accentuated by the composite nature of the sector defense force. In some cases the majority of personnel comprising the sector defense force will consist of naval or military construction, technical, or other service personnel. In such cases, the sector commander should carefully assess the capabilities of such personnel, making maximum use of their service or supply qualifications, in order to release better qualified personnel for combat duties.

30. Supply of the General Reserve.—Supply of the general reserve deserves most careful planning, as the successful commitment of the reserve may be the decisive action of the defense. Detailed plans for supply under all tactical plans should be made. These plans should provide for augmentation of organic motor transport of the reserve as necessary to obtain the required mobility of supply. Supporting service troops should be trained intensively under all plans, and rehearsals of the reserve should include all phases of supply. Truck drivers should know intimately the terrain over which the reserve may be employed, and be able to travel all roads in the area at night under black-out conditions. Supply plans for the support of the general reserve must specifically assign responsibilities and procedures for resupply of the reserve, regardless of the sector in which employed. Prescribed loads should be mandatory for vehicles of the reserve. Subject to the foregoing, the supply of the reserve follows the principles for supply of units in the attack in a fast-moving situation.

31. Resupply.—a. Resupply responsibilities are prescribed by the theater or area commander, who also prescribes the routine or periodic reports to be submitted to supplying agencies by the base commander. The base commander normally is charged with estimation of his requirements. To discharge properly this function, the base commander must be kept informed of prospective changes in troop population, types of troop units to be in the base, and any changes in the mission of the base. This information must be complete and timely, in order that the base commander may:

(1) Anticipate the needs of the base. Large increases in troop population result in proportionate changes in existing reserve levels and, if followed by hostile attack, may seriously endanger the defense.

(2) Prepare for the reception and handling of supplies.

b. Normal resupply is characterized by arrivals of shipping during periods of enemy inactivity.

c. Emergency resupply should be planned, using either air or subsurface means, or both. While detailed preliminary plans may not be practicable, such essentials as recognition signals, dropping zones for air dropped supplies and procedures for passing harbor entrance control posts by submarines, should be arranged between the base commander and other appropriate commanders.

32. Civilian Supply.—The base commander may, in some cases, be responsible for supplying the essential needs of the civilian population of the base. Proper measures to supplement native economy will bring valuable rewards—a friendly attitude on the part of natives results in additional intelligence sources, the use of natives for labor, augmentation of troop fresh food rations, and increased security of military stores. On the other hand, failure to plan properly for civilian essential needs may result in sabotage by civilians, loss of military food stocks by theft or barter, and in more serious cases, active civilian aid to the enemy.

SECTION 6

TRANSPORTATION

33. **General.**—a. The control of all transportation within the base is the responsibility of the base commander.

b. For base operation, this control, as pertains to transport of tactical units, administrative installations and other subordinate commands, is exercised through the unit commanders concerned. The control of all other non-tactical transportation is exercised through the base service commander.

c. During the conduct of the defense, control of all transport, not organic to the ground defense force or attached to it, is exercised by the base commander through the base service commander. Allocation and employment of all non-tactical transport is dictated by the requirements of the tactical situation.

d. The control of all transportation organic to the ground defense force or attached to it, is exercised by the ground defense force commander. This transportation will be allocated and employed to best support the tactical plan and plan of supply of the ground defense force. Centralized control of transportation will normally result in the most efficient operation, however, the ground defense force commander must allocate sufficient transportation to subordinate echelons to enable them to carry out their tactical and logistical missions.

34. **Motor Transport.**—a. For base operation the base commander should have a pool of motor vehicles available for use in unloading ships and for the movement of supplies and troops. This motor transport should be specifically assigned to the base for this purpose. However, if such is not the case vehicles may be withdrawn from base units and pooled for common use. The requirements for the motor pool should not be permitted to reduce transport of combat elements below that required for training and for battle. The motor pool operates under the transportation officer of the base service command.

b. During the conduct of the defense the motor pool will be used to augment combat elements and otherwise support the defense as directed by the base commander. In defense plans the base commander should indicate the probable employment of the motor pool and to which subordinate commanders various elements of the motor pool are to report when employed in the conduct of the defense. The ground defense force commander should in turn provide in his plans for the eventual employment of all or a fraction of the motor pool when attached to his command.

35. **Railways.**—a. The base railway service provides a common carrier service for all rail movements of personnel and materiel within the base area. The operations of the base

railway services are governed by policies and directives issued by the base commander and exercised through the base service commander.

b. Construction, rehabilitation, and major maintenance of railways are responsibilities of the base development command. Maintenance of rolling stock and other routine maintenance is the responsibility of the base railway service.

36. **Water Transport.**—a. If the magnitude of intra-base waterborne traffic warrants, a waterways service, which is responsible for furnishing a common carrier service for all intra-base water movements of personnel and supplies, may be established within the base command. All water transport not specifically assigned or attached to other subordinate commands is operated under the control of the transportation section of the base service command.

b. The control of port and harbor craft, and of inter-base water transportation within the base area is a responsibility of a naval commander designated by the base commander.

37. **Air Transport.**—The control of air transport by the base commander is limited to operation of air transport within the base area and to control of priorities for the movement of personnel and cargo by air. Priority control is exercised through base service commander.

38. **Civilian Transport.**—Civilian transport which is required by the base command will be commandeered and will be operated under the control of the transportation section of the base service command.

39. **Transportation Planning for Defense.**—a. The base and ground defense force commanders, in planning for the employment of transportation in defense, should consider requirements for transportation imposed by the tactical plan, and those related to the logistical support of the tactical plan. These requirements normally are the following:

(1) Sector requirements.

(2) Requirements for movement and support of the general reserve.

(3) Requirements for support of seacoast artillery, anti-aircraft artillery, separate tank groupments, and other special combat elements.

(4) Service command requirements.

b. Sector commanders should estimate their requirements for transportation by an analysis of the sector tactical plan, sector supply and evacuation plans, and the plans of the defense force commander for logistical support of the sector. Sector transportation planning should include provision for development of all available transport. Normally, chief dependence must be placed on motor transport, but in some cases use

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will be made of air, rail, or water transport. Under certain terrain conditions, animal transport or hand carry will be required. When plans for counterattack by sector reserves require rapid or extensive movement of the reserve, motor transport must be allocated by the sector commander to ensure sector reserve mobility. The sector commander will also provide for supply and evacuation systems for the support of all units of his sector; this entails transportation. If supply and evacuation plans of higher authority require the sector commander to furnish sector transportation for the movement of supplies and personnel outside the sector, as in the case of supply point distribution by the supply agency supporting the sector, additional transport may be required. After determining his transportation requirements, the sector commander should determine the adequacy of his transport, and request additional transportation from higher authority if necessary.

c. Transportation requirements of the general reserve include those dictated by the tactical plan and those incident to supply of the general reserve. The ground defense force commander should specifically assign transportation to the general reserve to permit mobility required by the tactical plan. Such transportation units as may be assigned should be available to the reserve for training to ensure complete coordination in the movement of the reserve. Salient features of transportation required for logistic support of the reserve are contained in paragraph 30.

d. The base commander should consider the transportation requirements of seacoast and anti-aircraft artillery, and other combat elements not a part of the ground defense force, particularly with regard to ammunition supply and displacement of weapons.

e. The ground defense force service element normally will have heavy transportation requirements in the execution of its mission of providing logistic support for the ground defense. The ground defense force commander should make an analysis of these requirements in their relation to his plans for sector defense and for employment of the general reserve.

SECTION 7

MEDICAL SERVICE

40. **General.**—a. The importance of efficient medical service and prompt evacuation of wounded in base defense cannot be over-estimated. History shows many cases of unsuccessful defense of bases where the decision was forced, not so much by a besieging enemy, but rather, by the defender's impossible burden of caring for his own sick and wounded. The insular character of advanced naval bases accentuates this problem. Evacuation from the base normally is impossible once the enemy has secured local air and naval superiority as a prelude to major attack. This section will discuss the problems of the medical service peculiar to the defense of a base.

b. The medical service normally is organized as a subordinate echelon under the base service command. However, the base commander is responsible for the proper functioning of the medical service both for base operation and base defense.

41. **Functions of the Medical Service.**—a. During normal base operation, the function of the medical service of the base is to care for sick and wounded, as set forth in the base mission. This function also may include the processing of casualties through the base as a link in the theater chain of evacuation. The base commander is responsible to the commander of the next higher echelon that casualties are evacuated to the rear area with as little delay as practicable and in accordance with the established evacuation policy. In order to fulfill this responsibility, the base commander must ensure that:

(1) The medical service is organized to accomplish its functions. Standing operating procedures for the handling, sorting, and transfer of casualties are promulgated.

(2) All available means of transportation, including ships and aircraft, are utilized to the utmost.

(3) Sufficient stocks of medical supplies and equipment are maintained at all times.

b. The base commander, in planning for medical support of the defense, may be confronted with some or all of the following situations, which are peculiar to base defense:

(1) The base may contain large medical facilities by reason of that part of its mission related to the theatre chain of evacuation.

(2) These large installations may not be able to provide assistance to the defense force during major attack, due to their vulnerability or to their location.

(3) Due to the possible preponderance, in some sectors, of non-combat personnel assigned to defense duties, the organic medical units within those sectors may have no relation to estimated casualty rates.

c. The medical plan for support of the defense must provide for the following:

(1) Location of base medical facilities with a view to their protection from hostile attack, particularly to ensure that large installations are placed deep within a defensive area, and away from likely targets.

(2) Dispersal of medical supplies, with a view to ensuring that each sector has medical reserve supplies in sufficient quantity to make it self-sufficient in case of isolation.

(3) Placing medical installations, particularly aid stations, evacuation stations, operating rooms, and power plants, underground or within protective construction.

(4) Discontinuing, at a time dictated by the tactical situation, the use of the base as a link in the theatre chain of evacuation.

(5) Evacuation from the base, by all available means of transportation, and at a time required by the tactical situation, of all patients undergoing treatment, other than those who can be shortly returned to duty.

(6) Placing in an inactive status such medical facilities as provide no medical support for the defense, and subsequent reassignment of medical personnel.

(7) Assignment to each sector of sufficient medical personnel and facilities to permit effective care of estimated casualties.

d. During the conduct of the defense, casualties in sectors are given first aid at forward sector installations, and normally are evacuated directly to the prescribed base installation which can provide the best care of the patient. Thus, as long as transportation and communication facilities permit, the casualty is moved directly to his destination, by-passing sector installations. When this procedure is no longer practicable, sector medical service functions as an integral and self-sufficient unit. Casualties are evacuated from forward sector medical installations to the prescribed sector installation best able to care for them.

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The defense of advanced
naval bases

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